Patent Statistics

Worldwide trends
Data collection and dissemination

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Economics and Statistics Division

IP information roundtable
Geneva, October 30, 2018
Uchtenhagen Room
Part I

WIPO Economics and Statistics Division

- Core objective
- Organizational chart
- Data collection
- Types of data
WIPO Economics and Statistics Division

Set up in 2009
to provide WIPO stakeholders
with
accurate and comprehensive datasets
and
high quality empirical analysis
WIPO Economics and Statistics Division

Dr. Carsten Fink
Chief Economist

Five sections – Fifteen staff

IP Statistics Section
Innovation Economics Section
Creative Economy Section
Data Development Section
Composite Indicator Research Section
Main sources of **WIPO Statistics Database**

**WIPO data**
- exhaustive
- up-to-date
- complete

**IP offices data**
- > 30 questionnaires
- annual survey
- aggregate

**PCT System – international phase** *(for patents)*
- Madrid System *(for trademarks)*
- Hague System *(for industrial designs)*

**Geo. Indication**
- Industrial design
- Patent
- Plant variety
- Publishing
- Trademark
- Utility model

**Filing**
- Registration/grant
- In force
- Pending
- etc.
### Application data coverage for 2016

<table>
<thead>
<tr>
<th>Type</th>
<th>Coverage</th>
<th>Offices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patent</td>
<td>99.2%</td>
<td>119</td>
</tr>
<tr>
<td>Trademark</td>
<td>97.7%</td>
<td>116</td>
</tr>
<tr>
<td>Utility model</td>
<td>99.9%</td>
<td>62</td>
</tr>
<tr>
<td>Industrial design</td>
<td>99.8%</td>
<td>124</td>
</tr>
</tbody>
</table>
What information provide most WIPO IP statistics data

Source
the origin of filings

Destination
where applications are filed

- IP office
- Country/territory
- Region
- Income group
- Total
- World estimate
<table>
<thead>
<tr>
<th>Destination</th>
<th>where an application is filed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resident filings</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Non resident filings</strong></td>
<td></td>
</tr>
</tbody>
</table>

- National IP office data
- Country/territory of origin data
Two counting methods
absolute & equivalent

Source
country/territory of origin

Absolute count
Resident filings
Regional office data (if applicable)

Equivalent count
Filings abroad
Regional office data (if applicable)

N° of jurisdictions in which filings are valid
**Concordance table**: absolute to equivalent count

*example of patents:*
One patent application filed is the equivalent of:

<table>
<thead>
<tr>
<th>Regional patent office</th>
<th>Abbreviation</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Intellectual Property Organization</td>
<td>OAPI</td>
<td>1 + 16</td>
<td>17</td>
</tr>
<tr>
<td>African Regional Intellectual Property Organization</td>
<td>AR IPO</td>
<td>1 + 1</td>
<td>1</td>
</tr>
<tr>
<td>Eurasian Patent Organization</td>
<td>EAPO</td>
<td>1 + 7</td>
<td>8</td>
</tr>
<tr>
<td>European Patent Office</td>
<td>EPO</td>
<td>1 + 1</td>
<td>1</td>
</tr>
<tr>
<td>Patent Office of the Cooperation Council for the Arab States of</td>
<td>GCC Patent</td>
<td>1 + 5</td>
<td>6</td>
</tr>
</tbody>
</table>

**Legend**: resident filing ; filing abroad
Part II

Global trends in IP activity

- Patent
- WIPO IP Services
Patent applications filed worldwide, 2001-2016

3.1 million in 2016

doubled in 13 years
Filings at the top five offices, 1883-2016

U.S. + Japan + Rep. of Korea + EPO = 1.29 million

1.34 million
The top five countries of origin in 2016

Top 5 account for 83% of world total

China accounts for 40% of world total.
Top 5 fields of technology in patent applications worldwide

Top 5 = 29% of total filings in 2015

Field of tech.; average annual growth (2005-15)

- Computer technology; +5.9%
- Electrical machinery, apparatus, energy; +7%
- Measurement; +7.3%
- Digital communication; +8.7%
- Medical technology; +4.7%

Source: WIPO Statistics Database and EPO PATSTAT database
Top 10 patent applicants worldwide, based on total number of patent families, 2011-14

All are from Asia and accounted for 4% of total

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company Name</th>
<th>Country</th>
<th>Number of Patent Families</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CANON INC; Japan</td>
<td>Japan</td>
<td>30,476</td>
</tr>
<tr>
<td>2</td>
<td>SAMSUNG ELECTRONICS CO., LTD.; Rep. of Korea</td>
<td>South Korea</td>
<td>26,609</td>
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<tr>
<td>3</td>
<td>PANASONIC CORPORATION; Japan</td>
<td>Japan</td>
<td>22,899</td>
</tr>
<tr>
<td>4</td>
<td>TOSHIBA KK; Japan</td>
<td>Japan</td>
<td>22,627</td>
</tr>
<tr>
<td>5</td>
<td>TOYOTA JIDOSHA KABUSHIKI KAISHA; Japan</td>
<td>Japan</td>
<td>22,190</td>
</tr>
<tr>
<td>6</td>
<td>MITSUBISHI ELECTRIC CORP; Japan</td>
<td>Japan</td>
<td>21,628</td>
</tr>
<tr>
<td>7</td>
<td>HUAWEI TECHNOLOGIES CO., LTD.; China</td>
<td>China</td>
<td>18,177</td>
</tr>
<tr>
<td>8</td>
<td>LG ELECTRONICS INC; Rep. of Korea</td>
<td>Korea</td>
<td>17,614</td>
</tr>
<tr>
<td>9</td>
<td>STATE GRID CORPORATION OF CHINA; China</td>
<td>China</td>
<td>17,233</td>
</tr>
<tr>
<td>10</td>
<td>SEIKO EPSON CORP; Japan</td>
<td>Japan</td>
<td>16,968</td>
</tr>
</tbody>
</table>

Source: WIPO Statistics Database and EPO PATSTAT database
Average pendency times from filing to first office action and final decision (months), 2016

In Brazil and India, the final decision occurs after 80 months, on average.
Distribution of patent examination outcome for selected offices, 2016

PCT applications by gender

In 2017, 31.2% of all PCT applications included women inventors.

A22. Share and number of PCT applications with women inventors, 2003–2017


The share of PCT applications with women inventors has risen in each geographical region in the world between 2007 and 2017.


<table>
<thead>
<tr>
<th>Rank</th>
<th>Name</th>
<th>Origin</th>
<th>PCT applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AFD CHINA INTELLECTUAL PROPERTY LAW OFFICE</td>
<td>China</td>
<td>3,256</td>
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<tr>
<td>2</td>
<td>SHIGA INTERNATIONAL PATENT OFFICE</td>
<td>Japan</td>
<td>3,156</td>
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<tr>
<td>3</td>
<td>KANGXIN PARTNERS P.C.</td>
<td>China</td>
<td>2,714</td>
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<tr>
<td>4</td>
<td>SAKAI INTERNATIONAL PATENT OFFICE</td>
<td>Japan</td>
<td>2,698</td>
</tr>
<tr>
<td>5</td>
<td>CHINA PAT INTELLECTUAL PROPERTY OFFICE</td>
<td>China</td>
<td>2,075</td>
</tr>
<tr>
<td>6</td>
<td>KBK &amp; ASSOCIATES</td>
<td>Republic of Korea</td>
<td>1,696</td>
</tr>
<tr>
<td>7</td>
<td>FISH &amp; RICHARDSON P.C.</td>
<td>United States of America</td>
<td>1,627</td>
</tr>
<tr>
<td>8</td>
<td>SCHWEGMAN LUNDBERG &amp; WOESSNER</td>
<td>United States of America</td>
<td>1,537</td>
</tr>
<tr>
<td>9</td>
<td>TSINGYIHUA INTELLECTUAL PROPERTY LLC</td>
<td>China</td>
<td>1,531</td>
</tr>
<tr>
<td>10</td>
<td>Y.P. LEE, MOCK &amp; PARTNERS</td>
<td>Republic of Korea</td>
<td>1,516</td>
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<tr>
<td>11</td>
<td>KILPATRICK TOWNSEND &amp; STOCKTON LLP</td>
<td>United States of America</td>
<td>1,504</td>
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<tr>
<td>12</td>
<td>GUANGZHOU SCIHEAD PATENT AGENT CO., LTD.</td>
<td>China</td>
<td>1,425</td>
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<tr>
<td>13</td>
<td>CHINA PATENT AGENT (H.K.) LTD.</td>
<td>China</td>
<td>1,383</td>
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<tr>
<td>14</td>
<td>BEIJING SANYOU INTELLECTUAL PROPERTY AGENCY LTD.</td>
<td>China</td>
<td>1,281</td>
</tr>
<tr>
<td>15</td>
<td>LIU, SHEN &amp; ASSOCIATES</td>
<td>China</td>
<td>1,270</td>
</tr>
<tr>
<td>16</td>
<td>UNITALEN ATTORNEYS AT LAW</td>
<td>China</td>
<td>1,259</td>
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<tr>
<td>17</td>
<td>SOEI PATENT AND LAW FIRM</td>
<td>Japan</td>
<td>1,236</td>
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<tr>
<td>18</td>
<td>TDIP &amp; PARTNERS</td>
<td>China</td>
<td>1,225</td>
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<tr>
<td>19</td>
<td>IPICS CORPORATION</td>
<td>Japan</td>
<td>1,212</td>
</tr>
<tr>
<td>20</td>
<td>KNOBBE, MARTENS, OLSON &amp; BEAR, LLP</td>
<td>United States of America</td>
<td>1,191</td>
</tr>
</tbody>
</table>
Statistics for WIPO services in 2017

- **243,500** applications filed
  - +4.5% annual growth
  - 56.2% non-resident share worldwide (2016)

- **56,200** applications filed
  - +5% annual growth
  - 63% non-resident share worldwide (2015)

- **19,429** application design counts
  - +3.8% annual growth
  - 47.7% non-resident share worldwide (2016)
Part III

Dissemination of WIPO IP Statistics

- Reports
- On-line tools
- Economics of IP
Release dates of the statistical publications

March
Hague/Madrid/PCT yearly reviews
Executive summaries
provides key statistics in up to nine languages

June/August
World IP Indicators
patent, utility model, trademark, industrial design, plant variety, geographical indication

December
Press release
first annual statistics on WIPO's IP services (partly estimated data)

IP Facts & Figures
in French, English & Spanish
Publications on global IP Statistics

➢ Gives world IP activity trends

➢ Provides short analysis of five IP rights’ main trends

➢ Explores all stages of the process though a large sets of indicators

➢ The key statistics

➢ Available in English, French and Spanish
The yearly reviews

➢ Describes the latest statistical trends
➢ Provides detailed sets of indicators
➢ Analyzes the System’s performance

PCT

Madrid

Hague
Executive summaries of the yearly reviews

- Focuses on the **key facts**
- Available in **Spanish** (in 6 to 9 languages)
- Released after the review (1-2 months after)

**PCT**

**Madrid**

**Hague**
3 IP rights - 14 indicators - 192 countries
WIPO IP Statistics Data Center

- Query our database
- Find our most comprehensive and up-to-date datasets
- Visualize and download our data
WIPO IP Statistics Data Center
WIPO economics of IP products

**Publications**

- **Global Innovation Index**
  1. Switzerland
  2. Netherlands
  3. Sweden

- **World IP Report**
  Intangible Capital in Global Value Chains

- **Economic Researches**
  N°44: Measuring innovation in energy technologies

**Web**

- **Home page**
  www.wipo.int/econ_stat

- **Literature Database**
  key literature on economics of IP

- **Development Studies**
  IP and economic development
Visit WIPO IP Statistics at
www.wipo.int/ipstats

Contact us
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